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AUTHOR Zingman, Doris E. Simon
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ABSTRACT

This study was conducted to determine the reading difficulty of commonly available, mass political literature, thereby to determine the reading level necessary to comprehend the bulk of these materials. Material was sampled from three issues of each source--three newspapers and three magazines--during convention and election time periods. To determine reading level, the Flesch Reading Ease Index and the Fry Nomograph were used. Total readability varied from the tenth to eleventh grade level in magazines, according to the Fry scale, to college level in newspapers, according to the Flesch scale. Statistical studies indicate that some 44 million United States citizens over age 25 have not completed twelfth grade and that 45 million read on the eighth grade level or below. Subsequently, the study concludes that approximately 45 million people--37% of the adult population--would experience difficulty in reading the materials sampled and that election materials from commonly available newspapers and magazines were too difficult to serve the purpose of informing the public. (Author/RL)

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READABILITY AND MASS POLITICAL LITERATURE: THE 1976 PRESIDENTIAL ELECTION CAMPAIGN

A THESIS

SUBMITTED TO THE FACULTY

OF THE GRADUATE SCHOOL OF EDUCATION

OF

RUTGERS

THE STATE UNIVERSITY OF NEW JERSEY

BY

DORIS E. SIMON ZINGMAN

IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE

OF

MASTER OF EDUCATION

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APPROVED: Edward Fry
EDWARD FRY

Joseph Zelnick
JOSEPH ZELNICK

Josephine Goldsmith
JOSEPHINE GOLDSMITH

DEAN: _____
MILTON SCHWEBEL

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CHAPTER I

THE PROBLEM

A prime interest of reading teachers has always been providing instructional material on a level appropriate for the learner. Unfortunately, a similar concern for providing the general public with needed materials they could indeed read and understand, has for too long been lacking. Studies in the area of readability of commonly used adult reading materials have been, for the most part, sporadic, and changes resulting from these studies have been few, and often less than permanent.

Background of the Problem and Importance of the Study

Most of the literature dealing with the readability of newspapers and magazines has been concerned with comparing readability levels of the various sections of the paper, or of different news sources. Studies have compared AP and UPI wire copy (Hoskins, 1973), metropolitan and non-metropolitan newspapers (Razik, 1969), editorials and news stories, and leads with the last hundred words (Moznette, 1968). Some lists of readability ratings of various newspapers or magazines have also been compiled (Allias, 1957; Barganz, 1970; Gunning, 1945).

Recently, researchers interested in the subject of

functional literacy have attempted to isolate the written materials an adult would have to cope with, to function competently in our complex society. A number of research projects were conducted to ascertain the readability of job related materials (Sticht, 1972) and 'survival' material like application forms and drivers' licenses (Harris, 1970).

However important, it is not enough to know whether people can read materials necessary for their jobs, or, materials which will increase their economic productivity (see criticism of such definitions of functional literacy in Stanley, 1972). Nor is it sufficient to know whether people can complete application forms for loan applications or drivers' licenses, activities in which they will engage but seldom in their lifetimes.

In a study conducted on a national sample of 5,067 adults, it was shown that the most common type of reading on an average day was newspaper reading (7 out of 10 Americans reading or looking at newspapers for an average of thirty-five minutes), followed by reading while traveling (traffic signs, ads, etc.),reading of mail, and reading during recreational activities for between three and seven minutes per day each on an average. Reading of magazines was next with four out of ten Americans reading for an average of thirty-nine minutes (Sharon, 1974).

Possession of political news was found to be a

"highly valued commodity," and fifty-one percent of a sample population of urban voters ranked newspapers as "most important source" with ten percent ranking news magazines most important for political news. Thus, sixty-one percent considered print media most valuable as compared with twenty-nine percent for radio and T.V. (Vinyard and Sigel, 1971). A study by Clarke and Ruggels (1970) of male and female heads of households in the Seattle area in which respondents submitted their opinions on which medium gave the best national news coverage, resulted in similar figures.

Sharon (1974) found that the part of the newspaper with the greatest readership, and the section to which the greatest importance was attached, was the main news.

Equally important, several studies found the print media to be the best source for diffusing political information, yielding the greatest amounts of knowledge to those who use them. The differences in public affairs knowledge were especially apparent between print users and broadcast users with high school or less than high school education (Schramm and Wade, 1969; Chaffee, Ward and Tipton, 1970; Bormuth, 1974).

The introduction to the section of the Office of Education study on the Political Knowledge and Attitudes of the American public, reads, "In a democracy, it is a citizen's duty to exercise his right to vote and to up-

hold the electoral process." (National Assessment of Educational Progress, 1973). This is not a new or revolutionary idea. Yet if a citizen is expected to meet this responsibility, he must be able to make use of those materials considered the most important sources of political information by the public, and the most informative, according to the research.

Statement of the Problem

The present study seeks to determine the readability levels of selected samples of mass political literature during a presidential campaign year.

In doing so, an attempt will be made to answer the following questions:

1. What are the readability levels of each of the newspapers and magazines studied?
2. What change, if any, is there in the readability levels of these materials as the campaign progresses from the time of the conventions to the election?
3. What is the mean readability level of all of the materials studied, and therefore what reading level would be necessary before one could be considered literate with respect to the bulk of these materials?
4. How large is the segment of the adult population which could not be considered literate with

respect to the bulk of these materials?

Definition of Terms

Readability was determined through the application to all materials of both the Fry Nomograph and the Flesch Reading Ease Formula, and is expressed in terms of grade level for the Fry and in terms of the Reading Ease Index as well as grade level for the Flesch.

National mass political literature refers to all news stories concerning the candidates and issues of the 1976 presidential election found in the newspapers and magazines studied.

Newspapers--The two metropolitan newspapers studied were The New York Times, and the New York Daily News. The New Brunswick Home News, a local New Jersey newspaper was also analyzed.

News Magazines--The three mass news magazines, Time, Newsweek, and U.S. News and World Report were studied.

Critical Time Periods--This refers to two key periods of time during an election--that of the conventions, and the month prior to the election--during which samples of the literature were taken.

Limitations of the Study

The three newspapers used in this study were from the Greater New York metropolitan area and might limit the study's national implications. However, the broad national distribution of the New York Times and the high circulation

of the Daily News,[1] and the variations in content and style of the three newspapers chosen, legitimizes their choice for this study.

Readability formulas were constructed on different data bases, and therefore are not comparable to, or necessarily representative of current adult mass media publications. However, a number of validity studies on adult reading matter including mass media materials have been conducted using both the Fry and the Flesch indices which demonstrated that they were effective in indicating reading difficulty, probable readership, and reader comprehension. (see review of the literature).

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[1]Daily U.S. distribution New York Times, 926,134; Daily U.S. distribution New York Daily News, 1,941,917.

CHAPTER II

REVIEW OF THE LITERATURE

Studies on the readability of political literature have largely centered around the newspaper and magazine industries. Spurred by their desires for increased readership, publishers avidly latched on to Flesch's 1943 formula and the possibilities it suggested. What followed in the next eight to ten years was a marked increase in studies and experiments, and readability counseling services aimed toward the mass media. Eventually this trend leveled out in the 1950's, with some renewed interest in the 1960's and again in the 1970's.

This chapter is organized for convenience in the following manner:

1. Readability studies of newspaper and magazine publications.
2. Readership studies
3. Validity and reliability studies on the Flesch and Fry formulas
4. Readability studies of mass political materials not appearing in newspapers or magazines

Readability Studies of Newspaper and Magazine Publications

The first large scale attempt to estimate the difficulty of newspaper and magazine material was undertaken by Gray and Leary in 1935. They compared different types of newspapers, and various categories of stories, and matched readability ratings to circulation figures. The results, as reported in their book, What Makes A Book Readable? are about what one would expect. Basing their ratings on four factors--number of monosyllables, percentage of simple sentences, percentage of different words, and syllabic length of words--they found that graphic and picture newspapers were easier than the large dailies, that magazines rated as most difficult tended to have the lowest circulation, and that writers of politics and world news tended to use longer words and sentences than writers of fiction. (Gray & Leary, 1935)

While doing experimental work in the Readability Laboratory of the Teacher's College of Columbia University, Rudolf Flesch found that the older formulas like the Gray-Leary and the Lorge which used vocabulary as an indicator of difficulty were inadequate for describing the readability of more difficult adult material due to the only slightly greater vocabulary diversity. He said that morphemes, abstract words, and sentence length would be much better indicators of the difficulty of material like that appearing in Yale Review and Foreign Affairs. (Flesch 1943) Later

in the same year, his first formula appeared in his book, Marks of Readable Style: A Study in Adult Education. Thus the introduction of readability to journalism began.

One year after the publication of Flesch's formula, Robert Gunning set up a readability counseling service called Readable News Reports. By May of 1945 he had worked with eight metropolitan dailies and had helped simplify the wire copy of the United Press which claimed that their copy had gone down five grades in three weeks, from 16th to 11th grade level. (Gunning, 1945)

During the same month the UPI issued a 32 page booklet reporting on their experience with Readable News Reports, and urging staff to simplify their style and avoid overly long lead sentences. ("Readability in News Writing," 1945)

Rudolf Flesch, writing for Printers' Ink recommended extending the use of his formula to the writing of advertising copy. (Flesch, 1945)

Lester Getzloe conducted a major study of foreign affairs news using the Flesch formula at Ohio State University. He found that the average foreign news story was written at the 14th grade level, five years above the education level of the typical adult. The United Press International (UPI) copy had a grade level of 12 (this was after their campaign), the Associated Press (AP), 15, and the New York Times was found to be the most difficult

with a grade level of 17. Time magazine was rated at grade 8, Newsweek at 11, and World Report at 12. ("Foreign News," Dec. 28, 1946)

In another study conducted by the Medill School of Journalism, Northwestern University, average leads and average sentence length were calculated for eighteen dailies. The average lead was thirty-three words and sentence length averaged nineteen to twenty-eight words, which they considered to be in the recommended range. The New York Times was considered the "wordiest" with average leads of fifty-five words and an average sentence length of twenty-nine words. They also noted a trend toward using several short paragraphs instead of one long paragraph. ("Some Add Shortening," 1947)

During the years from 1946-1948 some individual newspapers and magazines, including Newsweek, Look, the Washington Post, and the Wall Street Journal issued booklets about their experiences with readability measurement and directions for rewriting by the Flesch method.

Melvin Lostutter (1947) reported on a study conducted on The State Journal, published in Lansing, Michigan. Both the Flesch and the Lorge formulas were used, although Lostutter concluded that the Flesch was more valuable as the Lorge tended to 'bunch up' in the extreme ranges. He found that reports on government, politics, business and public addresses were on the college level, while sports,

society, and spot news were easier to read.

In 1948 the Associated Press undertook a readability campaign with Rudolf Flesch as consultant. Flesch found their stories below his standard, varying from "fairly poor" to "poor". AP ordered "all hands to learn to say it simply or get out," and Flesch made regular readability checks of news copy over the next two years. ("Say It Simply," Feb. 16, 1948) Flesch counts after the campaign showed that copy had indeed changed in the direction of ease, and AP editor Alan J. Gould wrote, "Certainly AP writing is better than it was before the campaign." (Flesch, 1951) The detailed results of the experiment can be found in The AP Writing Handbook by Rudolf Flesch.

However, many reporters felt that the use of the formulas hindered effective news presentation. In the 1950 Nieman Reports, several journalists complained of feeling strait-jacketed by the formulas, and of editors preferring writing which was simplistic. (Nieman Reports, April 1950)

An article in Time reported on the controversy raging in many a newsroom where editors were requiring reporters to stay under 15 or 20 words per sentence. ("Formula 14 W," Jan. 30, 1950)

Bryant Kearl,(1948) in his article, "A Closer Look at Readability Formulas" discusses the misuses of the formulas by people trying to "carry readability scoring much farther than its research base justifies." He points

out that the formulas do not and are not meant to measure all factors which contribute to readership like format, organization, and style, and so should not be expected to be an accurate judge of readership. Nor are they intended to be used as a recipe for good writing as they overlook too many elements of good style.

Robert Gunning (1947) answers three of the criticisms directed toward the formulas in an article in Editor and Publisher. He explains firstly that though "average" sentence length should be kept down, the formulas were never meant to dictate the words and length of sentences which could be used. Secondly, he claims that readability principles do not call for childish writing but rather ask that the simplest language possible be used. Thirdly, he claims that training in readability principles, rather than stifling a writer's style, stirs interest in good writing and helps a writer develop his own style.

During the 1950's there were comparatively few new readability studies conducted on the news media. For the time being interest in the field for journalists had reached a hiatus and was waning.

In 1952, Trenchard and Crissy studied issues of Time and Newsweek from two time periods, 1936-1940, and 1945-1949. They found easier to read editorial copy in both, especially Newsweek, and more difficult advertising copy in both, especially Time. However, upon collecting

statistics on the education level of the subscribers, they concluded that the average level of copy, though high, (high school grad and some college) was written within the educational level of the majority of the readers. (Trenchard and Crissy, 1952)

In 1957 a study on the reading difficulty of mass magazines was undertaken by Marcus Thomas Allias as his Ph.D. dissertation. He found the magazines to range in difficulty from a reading level of 8.0 to 13.6 with a median difficulty of 10.8. The greatest number of magazines (68%) were on the 10th to 11th grade levels. (Allias, 1957)

In the middle 1960's there seemed to be some renewed interest in readability in journalism. Some studies very similar to ones conducted in the 1940's began to appear.

In 1964, using a readability formula devised for computers, Wayne A. Danielson and Sam Dunn Bryan studied the readability of wire stories. They found the average AP story to be on a 6.7 reading level. Hard news (war, defense, diplomacy, politics and government) was found to be slightly higher, at 7.0, while soft news (human interest, sports, and crime) was slightly lower at 6.4. These figures show a marked decrease from the figures obtained in the 1940's studies. This study is also notable because it was one of the first in which computers were used to compute the readability of journalistic materials. (Danielson

& Bryan, 1964)

This article was followed by Robert L. Stevenson's (1964) study on the "Readability of Conservative and Sensational Papers Since 1872." His results were somewhat different than Danielson's and Bryan's. Using the revised Flesch formula as computed by Powers, he found that readability rose and fell with sensationalism. However, among what he labeled "stable or conservative papers" (N.Y. Times, Washington Post, N.Y. Tribune) readability had not changed significantly between 1872 and 1960 despite the emphasis on readability since the Flesch formula. Also, the "quality" newspapers were found to be among the most difficult to read.

Using the Dale-Chall formula, Taher A. Razik (1969) conducted a study of readability in metropolitan and non-metropolitan newspapers. In the metropolitan newspapers the copy averaged on the 9-10 level, while in the non-metropolitan papers it averaged on the 11-12 level. Again stories on crime, features, local news, tragedy and weather were found to be easier than stories on politics, and national and international news.

In the same year Kenneth L. Dulin (1969) published his article on the readability levels of adult magazines in three areas--woman's magazines, men's magazines, and general interest magazines. He used the Flesch Reading Ease Formula, the Farr-Jenkins & Patterson Revision of

Flesch, the Gunning Fog Index, and the Fry Graph. He found that contemporary popular magazines were written for the most part on the upper high school and college level.

Using the Gunning Fog Index, Kwolek (1973) conducted "A Readability Survey of Technical and Popular Literature." Explaining that a Fog Index of 11-12 is usually acceptable to most readers, while anything over 14 will probably be ignored, he found the mean Fog Index for newspapers to be 13.75, with the New York Times just slightly lower at 13.50. The mean Fog Index for general circulation magazines was 11.96, with Time slightly higher at 12.18. He noted a 2-unit increase in the Fog Index for these materials over the past twenty years, an indication that they have been becoming progressively less readable since 1953.

Another study was conducted comparing AP and UPI wire copy in 1973, by Robert L. Hoskins. Using the Flesch Formula, his results were quite different from those reported by Danielson and Bryan in 1964. Seventy-eight percent of the AP wire copy was on the 10th to 16th grade level with fifty percent being beyond the ability of the average high school graduate. The UPI copy was even less readable with eighty-three percent of the copy on the college and college graduate level. (Hoskins, 1973)

In a similar study using the Fry formula, Carolyn Reiley (1973) found AP copy to be somewhat more readable, averaging on the 10th grade level, with national news at

the 11th grade level.

Also in 1973, Bormuth, in his article, "Reading Literacy: Its Definition and Assessment" addressed himself to the topic of newspaper readability. By performing a series of regressions between scores on cloze readability tests made from newspaper articles and a reading test which gave grade level scores, he was able to determine that the average person who answered thirty-five percent of the cloze items correctly had a reading level of about 10.5. This, he said, indicated that "the average person is literate with respect to only half of the newspaper articles only after 10.5 years in school." (Bormuth, 1973)

Although there were some differences in results among studies, readability surveys conducted over the past ten years indicate that although there have been no changes of a major nature, there have been increases in the readability levels of journalistic material since the readability furor of the late forties subsided. However, at this point, materials still appear to be at a level somewhat lower than that at which they were measured in the early forties before the readability campaigns had begun.

Readership Studies

With the multitude of readability studies appearing in the 1940's, it was inevitable that the researchers would be concerned with the validity of results. There-

fore, between the years of 1946 and 1952 a number of validation studies were conducted, the majority of which used split-run tests,[2] and attempted to determine whether a lowered readability index indeed resulted in increased readership.

Donald L. Murphy, in 1946, conducted a split-run test on several articles in Wallace's Farmer and Iowa Homestead. In one test the original version had a Flesch score of 3.7, which is standard or somewhere near the Reader's Digest level according to Flesch, while a second version was written on a 1.5, or easy level. The easy version received 18% greater readership. Two other sets of articles were also tested. In one, the two versions had readability levels of 5.03 (difficult-like Harpers) and 3.92 (standard) respectively. In another, the level was dropped from 3.32 (standard) to 2.47 (fairly easy). In neither of these two cases were changes in reader response significant. (Murphy, Jan. 10, 1947)

Murphy conducted a follow-up study in which four articles in Wallace's Farmer and Iowa Homestead originally written at the 3.5 level, were rewritten at the 1.5 level for a split-run experiment. The results of this study were even more impressive. The articles with the lowered readability index showed an increase of as much as 45% to

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[2]In split-run tests, two versions of an article are prepared on diverse readability levels and are then distributed at random to different members of a selected audience.

65% in readership. (Murphy, Sept. 19, 1947)

During the same year, the Mac Fadden Women's Group published a study applying Flesch's formula to magazines and magazine advertising. It reported that copy must rate no higher than a 2 (fairly easy) for effective mass readability. (Murphy, Sept. 19, 1947)

Using corrected quantitative readership scores based upon the percent of the article each respondent had read, Howard B. Lyman analyzed the second Murphy experiment. He found that one article showed a 9.4% decrease in readership with the 1.5 readability rating, but the other three showed increases of 7.3% to 66% for the articles with the 1.5 readability index. He concluded that lower Flesch counts are a factor in raised readership ratings. (Lyman, 1949)

In 1947, while conducting a study measuring the effects of length of story on readership based on personal interviews, Wilbur Schramm also measured the readability of the stories. He found that stories written on a 7th-9th grade level on the Flesch scale held their readers longer (they had read a greater number of paragraphs) than those on a 10th-12th grade level. However, the differences were not necessarily significant and this was not the best type of study for this subject, as a split-run technique was not used. (Schramm, 1947)

Another experiment was conducted on articles in the

Nov. 20, 1948 edition of the Birmingham News. In eight news categories several articles were published on a reading level above eighth grade, and others on a below eighth grade reading level according to the Flesch scale. Care was taken to control for pictures, length of story, type headline, and other factors which might have influenced readership. In every case the easier to read stories got higher readership; in some instances almost double. (Feld, April 17, 1948)

Interesting results were obtained in a split-run experiment at the State University of Iowa in which two versions of a story concerning the University were printed in an experimental campus newspaper and distributed to students at their home addresses. The easier version had factors associated with ease of reading from five readability formulas. Some of the factors included were fewer syllables and affixes, and more personal references and active verbs. Although there was only a very slight increase in the number of articles which were read in the easier group, the mean number of paragraphs increased by 83% and the number of respondents reading every paragraph increased by 82%. (Swanson, 1948)

Using stories especially chosen for their high interest value, a similar split-run experiment was conducted by Merritt C. Ludwig on a 1948 issue of Wallace's Farmer. However, in this experiment, two factors from Flesch's

formula, word length, and number of personal words, were manipulated separately. When the number of syllables were reduced from 158 to 132, the readership differences were statistically significant at the 10% level of confidence. This was accepted as significant because with the extremely high interest level of the articles, the experimenter was surprised that any readership differences resulted. There were no significant differences between the two versions in which the number of personal words used was manipulated. (Ludwig, 1949)

Charles E. Swanson and Harland G. Fox used a different criterion, comprehension of material, in their validation study. Two versions of twelve articles on a high interest level were sent to employees of a midwestern company. Version A had a 7th grade rating on the Flesch and the Dale-Chall scales, while version B had an 11th grade rating. In line with Swanson's 1948 findings, Swanson and Fox did not find highly significant differences in the number of people who read each article. However, subjects who read easier versions of the articles received considerably higher scores on a test of comprehension. (Swanson & Fox, 1952)

The overall findings of these studies indicate that increases in readership are probable when easier versions of an article are offered. Even when the interest level of the material is high enough to draw readers in spite

of the difficulty of the writing, the studies indicated that a greater proportion of the lower level article is likely to be read and with greater understanding.

However, most of these studies compared a very difficult article (11th-12th grade or college level) with a fairly easy article (6th or 7th grade level). Realistically, when changes in newspaper and magazine readability are made, they are usually more subtle and on higher levels (college level to 11th-12th grade level or at best to 9th-10th grade level). The validation studies did not seem to often deal with changes of this sort.

Validity and Reliability Studies on the Flesch and Fry Formulas

Several studies have been conducted in this area. However, the writer has chosen to restrict the discussion to studies on middle, secondary, and non-text materials, as these are the types of materials used in this study.

In his masters thesis in 1967, Andrew Kistulenz compared five readability ratings to comprehension test scores on ten high school literature books. The Fry, SRA, Dale-Chall, and Flesch formulas gave ratings within one grade of each other on six of the ten books, and were within two grades on all. They strongly tended to rank books in the same order of difficulty, and had correlations of .90 or higher with student comprehension scores. (The Botel formula, the fifth method analyzed did not

correlate highly with the other formulas.) (Kistulenz, 1967)

Comparing the McLaughlin, Dale-Chall, and the Fry readability formulas to sample passages ranging from fifth to eleventh grade level, Pauk obtained favorable results for the Fry method. He found that the Fry Nomograph produced scores identical to those obtained with the Dale-Chall fifty percent of the time, and would be within two grade levels with eighty percent reliability. (Pauk, 1969)

In 1974, Alyce Keil conducted an experiment on 218 fourth to sixth grade students in an attempt to validate the Fry Readability Nomograph. She found that, based on cloze scores, in two out of three cases the nomograph gave "a rough estimate of materials suitable for use according to grade placement," and in five out of six cases, it "succeeded in designating material which was suitable when assigned according to tested reading level." She concluded that the "readability formula was generally validated." (Keil, 1974)

In a study of comparative readability, the Fry, Flesch, Lorge, and Dale-Chall formulas were applied to fifty-three Newberry Award Books. The authors felt that the methods of Lorge and Flesch were the most valid within the given comparison set, with the Fry producing scores almost one grade level lower than the mean readability of

the four methods for each book. Conversely, the Dale-Chall produced scores about one level higher than the mean readability. However, both the Fry and the Flesch formulas were within two levels of the mean readability scores obtained for each book with ninety percent reliability. (Guidry and Knight, 1976)

Based on these studies, it appears that Fry's claim that his formula could generally be expected to be accurate within one grade level, is a fair expectation for both his formula and the Flesch.

Several further validity studies indicating that materials found more readable by the formulas, particularly the Flesch, will attract greater readership can be found in the 'Readership Studies' section of this chapter.

Two significant studies on the reliability of the Flesch formula were conducted in 1950 and 1953 by Hayes, et al. and England, et al. respectively. Data from house organs were used in both studies. Hayes, et al. also included forty prize winning letters from a General Motors contest in their study. Reliability levels on 'test' and 're-test' analysis were quite high, ranging from .96 to .99, the higher scores being obtained when one highly experienced analyst was used as opposed to several inexperienced analysts. The general conclusion of both studies was that analyst to analyst reliability is very high for the Flesch Reading Ease Formula. (England,

Thomas & Paterson, 1953; Hayes, Jenkins & Walker, 1950)

Readability Studies of Mass Political Literature Not Appearing In Newspapers or Magazines

Studies on the readability of other types of political materials were sparse, and only four studies were located.

Guckenheimer, (1947) referring to the findings of a recent Cornell study in which Americans were found to be ill-informed in the area of international affairs, states that the 'best' available materials for teaching current international affairs in the high schools are pamphlets by organizations like the Department of State, the United Nations, and the Public Affairs Committee. Accordingly, he sets out to determine the readability levels of these pamphlets using the Dale-Chall formula. He found that 75% of the pamphlets were on a college level, 14% were on an 11th-12th grade level, and 11% were on a 9th-10th grade level. Therefore, he concluded that in their present states, these pamphlets were not suitable for educating either high school students or the general populace.

Two studies conducted on the readability of speeches by presidents or presidential candidates found that in recent years speech writers have been somewhat sensitive to producing materials which would be readable, or listenable for the public.

In an analysis of the major pre-election speeches

of Eisenhower and Stevenson, Siegel and Siegel (1953) found both the Eisenhower and Stevenson speeches to range from 'standard' to 'fairly difficult' or in the 7th to 10th grade range on the Flesch Reading Ease Scale. As regards human interest, for the most part the speeches were classified as 'interesting' with a few exceptional speeches receiving a 'highly interesting' Flesch Human Interest rating.

Using the Fry Nomograph, Felton and Felton (1973) conducted a readability study on the Presidential Inaugural Addresses. They found that the levels of the speeches had generally gone down. While the average rating of the first sixteen speeches delivered was college level, the last sixteen, with only two exceptions, appeared to hover somewhere about the 8th-9th grade level.

A study, remarkable for the rapidity with which its findings were acted upon, was conducted at the Loyola University Reading Center on the reading difficulty of the 1972 Los Angeles Ballot Issues. Twenty-two State Propositions, five city ballot issues, and five county ballot issues were analyzed using both the Fry and the Dale-Chall formulas. According to the Fry Nomograph, all of the above, with one exception, were on the college level. The results with the Dale-Chall formula were similar, with two propositions placed on the 11-12 level, seven propositions and two city and county issues on the

college level, and fourteen propositions and eight city and county issues on the graduate level. Largely as a result of this study, a new City Ordinance was passed in July of 1974, requiring that all ballot issues be re-written to approximately eighth grade reading level. (Reiland, 1973)

If such changes are to be effected in other public domains where the individual has the need and the right to materials written on his comprehension level, readability studies must continue to be conducted. Even in areas like general newspaper and magazine readability where concern that the material be readable was widespread at one time, reversals have occurred and studies conducted in the past ten years show that the readability of these media publications is again on the upper high school and college level. Thus, it is essential that there continually be re-evaluation in even those areas where changes have taken place to prevent reversion to the more difficult readability states.

It is also important from the standpoint of literacy that studies be conducted on materials of political and social import. If the Sticht study on job related materials, the Harris report on 'survival materials', the Reiland paper on ballot issues, and the Bormuth study on newspaper materials (all of which found their respective sources to be written on the high school or college level)

are to be taken seriously, it must be realized that the 5th grade standard for literacy currently accepted by the U.S. Bureau of the Census and the U.S. Army is hopelessly unrealistic. It is not satisfactory to merely downgrade written materials. Accepted standards for literacy must also be raised.

The present study follows a long line of research on the readability of politically and socially necessary materials. It brings the readability studies cited on newspapers and magazines up to date, and takes them into a new and more specific area, that of mass political information meant to educate the public on the candidates and issues of a presidential election.

CHAPTER III

PROCEDURE

This chapter describes the procedure by which the materials studied and the readability instruments used were selected, and how the instruments were applied to determine the readability levels of the mass political literature of the 1976 Presidential campaign.

Rationale for Selection of Materials

The three newspapers chosen were selected both for their specific characteristics and for their easy availability.

In her study, "Press Coverage Patterns of Campaign News: the 1968 Presidential Race," Doris Graber found that the New York Times "ranked first in discussion of all kinds of issues" when compared to nineteen other well known and respected papers throughout the U.S. (Graber, 1971) Because of its competence in dealing with campaign issues, its reputation for erudition, and its large domestic circulation which is not confined to the New York Metropolitan area (total U.S. daily distribution--926,134),[3] the New York Times was selected.

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[3]Figure courtesy of the circulation department of the New York Times.

The New York Daily News was chosen primarily because of its wide appeal. With a total daily circulation of 1,941,917[4] copies, it is the best selling daily in the U.S. With its mass appeal, and its reputation for being more readable than many of the more 'scholarly' papers, like the New York Times, this author felt that it was ideally suited for a study of this kind.

The New Brunswick Home News was selected as an example of any one of the over 1,000 local newspapers available throughout the U.S. In a study on cosmopolitan media usage in a small city (Madison, Wisconsin), McNelly et al. found that 70% of the newspaper readers in the sample were getting their news from the local paper. (McNelly, Rush, & Bishop, 1968) Therefore, it was felt that a local paper should be included. The Home News was chosen because of its easy availability to the present writer.

As the three largest selling news magazines in the U.S., Time, Newsweek, and U.S. News and World Report were felt to be the logical choices for this study. They are ordinarily the only three news magazines available at the local newsstand or candy store.

Instrumentation

The Flesch Reading Ease Formula and the Fry Nomograph were the two instruments chosen for obtaining reada-

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[4]Figure courtesy of the circulation department of the New York Daily News.

bility measurements. They were selected because of their demonstrated validity on secondary level and non-text materials, and because of the success other researchers had experienced using them on these types of materials. Their ease of application was also a factor in their selection. The writer decided to use two formulas because of the margin for error inherent in any single readability formula. Flesch, in the preface to the Art of Plain Talk, advises prospective users of his formula not to expect from it, "more than a rough estimate," while Fry in "A Readability Formula That Saves Time," answers the question, "How accurate is the score?" with "probably within a grade level." Therefore, it was hoped that by securing levels of readability from two formulas, more precise estimates could be obtained.

Sampling of the Literature

Two key periods of time in the progression of the national election were chosen for analysis. Time Period 1, the period of the conventions, began on July first. Time Period 2, the period prior to the actual election, began on October first.

All news reports (editorials and letters to the editor were not used) on the issues, or candidates and their views, in the first three editions of each newspaper and magazine after the above dates were analyzed. If no material on these topics appeared on any date, the next

edition containing such material was analyzed.

Readability Sampling

The study of readability sampling procedures has been an area largely ignored. Presently, there is no single standard for sampling accepted by all or most researchers involved in readability analysis. Most of the information available on this subject appears as suggestions for use with the various formulas by the authors of these formulas.

Dale and Chall recommend sampling one hundred words from every tenth page of a book. As most teen-age or adult books would contain about three hundred words per page, this method would result in approximately one 100 word passage per 3000 words, or 1/30th of the total wordage of the book being sampled. (Chall, 1958)

In The Art of Readable Writing, Flesch recommends taking three to five samples of an article and 25 to 30 of a book. Since most books lie in the 150-350 page range, this would result in taking one sample from every sixth to twelfth page of print, or sampling somewhere between 1/18th and 1/35th of the book. (Flesch, 1949b)

In A Readability Formula that Saves Time, Fry recmended choosing three passages regardless of the length of the work, selecting more only when great variability is encountered in the samples selected. (Fry, 1968)

Based on this research, a sampling method was

devised which both satisfied the requirements put down in the literature and was suitable for this study. A minimum of approximately 1/16th of the wordage of each article was sampled for materials under 8000 words in length, and a minimum of approximately 1/18th of the longer materials was sampled. The same sampling procedure was applied for both formulas.

Specifically, for materials under 5000 words in length, three samples were taken. Four samples were taken from materials between 5000 and 6500 words in length, and five samples were taken from materials between 6500 and 8000 words in length. This resulted in a minimum of approximately 1/16th of these materials being sampled.

For materials between 8,000 and 10,500 words in length, six samples were taken; for materials between 10,500 and 12,500 words, seven samples; between 12,500 and 14,500, eight samples; between 14,500 and 16,500, nine samples. This resulted in at least 1/18th of the wordage of these materials being sampled. None of the sources used contained materials on the candidates or issues exceeding this length.

All samples were analyzed according to the standard instructions for the Fry Nomograph as outlined in Fry's article, "A Readability Formula That Saves Time," and for the Flesch Reading Ease Formula as explained in Flesch's book, The Art of Readable Writing. (Fry, 1968;

Flesch, 1949b)

Treatment of Data

Firstly, readability levels have been reported individually for each newspaper or magazine for each of the two time periods. For each newspaper or magazine the level obtained at each time period was then compared to the level obtained for that source at the other time period.

Then, a single readability score for each newspaper and magazine was obtained, representing the mean readability level of that source across both time periods. The mean readability level of each source was subsequently compared to the mean readability levels of the other sources. A mean readability score for each type of literature (total newspaper readability and total magazine readability) was also calculated, and comparisons between both types were made.

Finally, a single readability score was obtained representing the mean readability level of all materials studied, to determine the reading level required to comprehend the bulk of the materials. This level was compared to figures on the approximate numbers of people in the U.S. reading at various grade levels, based upon published norms for the reading tests in four batteries (Sequential Tests of Educational Progress, Series II; Metropolitan Achievement Tests; California Achievement

Tests; and the Comprehensive Tests of Basic Skills) as reported by Abraham Carp in, "The Reading Problem in the United States." (Carp, 1971) A comparison was also made between this mean readability level, and, national education statistics as reported in the U.S. Bureau of the Census Current Population Reports. (U.S. Bureau of the Census, 1976)

Reporting of Readability Statistics

All readability figures have been reported in terms of grade level equivalents (hitherto referred to as G.E.) for both the Fry and the Flesch formulas. However, on the high levels at which these materials tested the Flesch G.E.'s were quite broad with most of the material testing either in the 10th-12th grade, or the 13th-16th grade categories. Therefore, the Flesch Reading Ease Index (hitherto referred to as R.E.I.), the figure from which the G.E.'s are obtained, will also be reported. The more difficult, or less readable the material, the lower the number it is assigned on the Flesch R.E.I. Specifically:

60-70 indicates 8th-9th grade level material
50-60 indicates 10th-12th grade level material
30-50 indicates 13th-16th or college level material
0-30 indicates college graduate material

CHAPTER IV

FINDINGS AND DISCUSSION

Reported in this chapter are the readability levels obtained for all newspapers and magazines studied during two key time periods as well as comparisons between the various sources and types of literature. To ascertain the suitability of these materials for the general public the mean readability level for all sources was then compared to figures on the educational attainment and reading ability of adult Americans.

Individually Reported Readability Levels

The material tested during Time Period 1 (T.P.1) ranged from 10th grade to college level with a R.E.I. of between 36 and 52. (See Table 1) The slightly higher Flesch G.E. appeared to be partially the result of the inclusion of proper nouns in the calculation of the Flesch index and their exclusion in the Fry count. The additional words included in the Fry samples to substitute for the proper nouns usually contained fewer syllables than did the proper nouns thereby lowering the samples' syllable counts while possibly increasing the number of sentences in the sample. A lowered grade level

TABLE 1

READABILITY SCORES AND GRADE LEVEL EQUIVALENTS
REPORTED INDIVIDUALLY FOR NEWSPAPERS AND
MAGAZINES DURING TIME PERIOD 1
(JULY, 1976)

	Fry			Flesch			
Source	Syllables[a]	Sentences[b]	G.E.[c]	Syllables	Sentences	G.E.	R.E.I.[d]
N.Y. Times	158.3	3.7	12th	161.9	30.1	College	40
Daily News	163.4	3.9	College	168.4	28.3	College	36
Home News	165.7	5.2	12-13th	170.8	22.5	College	40
Newsweek	161.3	4.3	12th	166.6	22.4	College	43
Time	156.5	4.9	11th	161.8	19.8	12-13th	50
U.S. News & World Report	156.7	5.5	10th	161.7	18.0	10-12th	52

[a]Difference in syllable count between formulas is the result of the exclusion of proper nouns from the Fry count.

[b]"Sentences" in the Fry formula refers to the approximate number of sentences per 100 word sample. "Sentences" in the Flesch formula refers to the approximate number of words per sentence in each of the sample passages.

[c]G.E. means Grade Level Equivalents.

[d]R.E.I. means Flesch's Reading Ease Index.

therefore often resulted. However, the Fry and Flesch scores were still quite close. Were the materials to be rank-ordered in terms of difficulty, the same results would be obtained using either formula.

The material tested during Time Period 2 (T.P.2) ranged from 9th to 12th grade level on the Fry Nomograph and from 10th to college level on the Flesch scale with a R.E.I. of between 37 and 57. (See Table 2)

As plotted on the Fry Nomograph, material in T.P.2 tested approximately one grade level lower than that in T.P.1. According to the Flesch G.E. both time periods yielded almost the same results; however, the R.E.I. was approximately 4 points higher per source (the material was easier) during the second time period. As 10 points on the Index normally represents at least two grade levels, the 4 points were considered to signify a difference of approximately one grade level in difficulty between the two time periods. Thus, the results for the two formulas were comparable. (See Table 3 for comparisons between scores for the two time periods)

Because the readability formulas are in themselves only accurate within a grade level, a one year disparity is not necessarily significant. However, the consistency of the disparity between periods made it a phenomenom worth examining.

During the original analysis it was observed that

TABLE 2

READABILITY SCORES AND GRADE LEVEL EQUIVALENTS REPORTED INDIVIDUALLY FOR NEWSPAPERS AND MAGAZINES DURING TIME PERIOD 2 (OCTOBER, 1976)

	Fry			Flesch			
Source	Syl-lables	Sen-tences	G.E.	Syl-lables	Sen-tences	G.E.	R.E.I.
N.Y. Times	160.7	4.1	12th	164.7	29.8	College	37
Daily News	157.1	5.0	11th	164.2	25.7	College	42
Home News	157.3	5.3	11th	162.3	21.4	College	49
News-week	157.?	5.9	10th	163.5	19.0	12-13th	50
Time	153.4	5.0	10th	159.8	22.8	College	49
U.S. News & World Report	153.0	5.9	9th	156.8	17.6	10-12th	57

TABLE 3

COMPARISONS OF READABILITY LEVELS OBTAINED AT TIME PERIOD 1 AND AT TIME PERIOD 2 INDIVIDUALLY BY SOURCE, AND AVERAGE OF ALL SOURCES

	Time Period 1			Time Period 2			Change Between Time Periods		
Source	Fry G.E.	Flesch G.E.	R.E.I.	Fry G.E.	Flesch G.E.	R.E.I.	Fry G.E.	Flesch G.E.	R.E.I.
N.Y. Times	12th	College	40	12th	College	37	Same	Same	-3
Daily News	College	College	36	11th	College	42	-2	Same	+6
Home News	12-13th	College	40	11th	College	49	-1	Same	+9
News-week	12th	College	43	10th	12-13th	50	-2	Same	+7
Time	11th	12-13th	50	10th	College	49	-1	Same	-1
U.S. News & World Report	10th	10-12th	52	9th	10-12th	57	-1	Same	+5
Average All Sources	12th	College	43	11th	College	47	-1	Same	+4

the sections of the papers and the magazines dealing with human interest materials or interviews were written on a level somewhat below that of the rest of each source. Therefore, it was hypothesized that increases in the number of human interest stories and interviews as the campaign progressed could be one reason for the discrepancy in readability levels.

Consequently, the percentage of 'Straight Reporting' (hitherto referred to as SR) stories and 'Human Interest and Interview' (hitherto referred to as HI&I) material was calculated for each source during each time period, and readability analyses were then conducted. The results appear in Table 4. For the purposes of this study everything which was not clearly an interview, or a story dealing nearly exclusively with the personalities, interests and opinions of non-political persons: wives, children, friends, etc. of the candidates, was classified as SR.

The HI&I material was more readable than the stories classified as SR, with a two to five year gap between the two categories, depending on the source. There was an average increase of 15.4% in the amount of HI&I material during the second time period with some increase observed in four of the six sources. In three of these (Home News, Newsweek, and U.S. News & World Report), there was also an increase in the R.E.I. indicating that the material was less difficult. Only in the New York Times was an

TABLE 4

COMPARISONS OF "STRAIGHT REPORTING" AND "HUMAN INTEREST AND INTERVIEW" MATERIAL FOR EACH SOURCE DURING EACH TIME PERIOD

	Time Period 1							
	Straight Reporting				Human Interest & Interview			
Source	%	Fry G.E.	Flesch G.E.	REI	%	Fry G.E.	Flesch G.E.	REI
N.Y. Times	100	12	Coll.	40	0	-	-	-
Daily News	100	Coll.	Coll.	36	0	-	-	-
Home News	100	Coll.	Coll.	40	0	-	-	-
News-Week	61	Coll.	Coll.	41	39	10	10-12	54
Time	68	11	Coll.	44	32	9	10-12	61
U.S. News & World Report	100	10	10-12	52	0	-	-	-
Total	-	-	-	-	-	-	-	-

TABLE 4 (cont.)

COMPARISONS OF "STRAIGHT REPORTING" AND "HUMAN INTEREST AND INTERVIEW" MATERIAL FOR EACH SOURCE DURING EACH TIME PERIOD

	Time Period 2									
	Straight Reporting				Human Interest & Interview				Change	
Source	%	Fry G.E.	Flesch G.E.	REI	%	Fry G.E.	Flesch G.E.	REI	%[a]	REI[b]
N.Y. Times	86	Coll.	Coll.	29	14	9	10-12	54	+14	-3
Daily News	100	Coll.	Coll.	42	0	-	-	-	none	+6
Home News	42	12	Coll.	41	58	8	8-9	61	+58	+9
News-week	56	12	Coll.	45	44	7	8-9	63	+5	+7
Time	82	11	Coll.	45	18	7	8-9	60	-14	-1
U.S. News & World Report	71	10	12-13	50	29	7	8-9	70	+29	+5
Total	-	-	-	-	-	-	-	-	+15	+4

[a]% refers to the increase in the amount of space devoted to H.I.&I. material of the total amount of space devoted to election news over the two time periods.

[b]R.E.I. refers to the change in the Reading Ease Index for all of the election material in each source from T.P.1 to T.P.2.

increase in HI&I stories accompanied by a decrease in the R.E.I. Thus, the hypothesis was generally supported.

On the other hand, the Daily News, which was also more readable during the second time period, showed no increase in the amount of HI&I material.

A possible explanation for the differences in readability which cannot be accounted for the variance in the amount of HI&I material is the origin of the articles. Stories obtained from AP, and articles with different bylines, might very well have varying readabilities.

Mean Readabilities for Sources and Types of Literature

As shown in Table 5, the three newspapers were very close in readability, with less than one grade level difference among them. The three magazines were also fairly close in readability yielding a one grade level spread. However, the mean readability level of the magazines was almost two grade levels below that of the newspapers.

This can be partially accounted for by the greater amount of space devoted to interviews and human interest stories in magazines (average of 27% as opposed to 12% for newspapers). The SR sections of both Time and Newsweek were written on levels very similar to that of the newspapers. (See Table 4)

Considering the two components to the formulas, sentence length accounted for a greater degree of the variability in level than did number of syllables. The

TABLE 5

MEAN READABILITY LEVELS FOR EACH SOURCE AND EACH TYPE OF LITERATURE RANK-ORDERED IN TERMS OF DIFFICULTY

	Fry			Flesch			
	Syllables	Sentences	G.E.	Syllables	Sentences	G.E.	R.E.I.
Source							
N.Y. Times	159.5	3.9	12th	163.1	30.0	College	39
Daily News	160.3	4.4	12th	166.3	27.0	College	39
Home News	161.5	5.2	11-12th	166.6	22.0	College	45
Newsweek	159.3	5.2	11th	165.0	20.7	College	47
Time	154.9	4.9	10th	160.8	20.5	12-13th	50
U.S. News & World Report	154.9	5.7	10th	159.2	17.8	10-12th	54
Type							
Newspapers	160.4	4.5	12th	165.4	26.3	College	41
Magazines	156.4	5.2	10-11th	161.7	19.9	12-13th	50

number of syllables per 100 words was surprisingly stable across all six sources, ranging only from 155 to 161 in the Fry, and from 159 to 166 in the Flesch. With equivalent sentence lengths, such a difference could not account for more than a one grade level disparity on the Fry Nomograph, and would only alter the Flesch R.E.I. about 6 points. On the other hand, sentence length varied from 17.8 to 30.0 words per sentence.[5] Given an equivalent number of syllables, a disparity of this nature would result in a 13 point gap in the Flesch R.E.I., or as much as a two grade level difference in either formula.

Agreement With Review of the Literature

Readability in the print media studied has not changed drastically over the years. There were some improvements in readability during the forties with the various sources gaining or losing somewhat since that time and leveling off in the past ten years.

Gunning (1945) claimed a drop in difficulty from 16th to 11th grade level for the UPI copy after the first readability campaign. Today's campaign news fell somewhere in between these levels. Getzloe (1946) found the stories he analyzed in the New York Times to be written on 17th or college grad level, considerably higher than its present level.

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[5]The Flesch count is cited here as it includes the proper nouns, and is therefore a more exact count for this purpose.

In a 1947 study conducted by the Medill School of Journalism the average newspaper sentence was found to run between 19 and 28 words, with the New York Times sentences to be up at about 29 words. These are almost the exact figures obtained in the present study. (Some Add Shortening to 5W Lead Recipe, 1947)

Toward the end of the readability campaigns in 1950, Time magazine had as one of its goals to keep sentences in the 15 to 20 word range. (Formula 14W, 1950) Over 25 years later, average sentence length is 20.5 words.

With one exception, the findings of the studies conducted in the past twelve years are quite compatible with the figures obtained in this paper. In 1964, Stevenson observed the "general trend toward standardization of readability in all newspapers" which was evidenced in this study by the similarity in level of the three newspapers. He also noted that among stable papers readability had not changed significantly in one hundred years. (Stevenson, 1964) Additionally, the mean readability level of about 10.9 on the Fry scale for men's, women's, and general interest magazines in Dulin (1969) was remarkably close to that of the three news magazines in this study.

In 1973, three studies were conducted on newspapers and wire copy which resulted in similar figures. In all three studies national news and AP copy tested on about

the 11-12th grade level or very close to the level of the campaign articles. When the Fry Nomograph was used to compute readability (as was done in the Reiley Study) the resulting levels were somewhat lower than when the Flesch formula was used (as was done in the Hoskins Study). (Hoskins, 1973; Razik, 1973; Reiley, 1973) The same relationship between the two formulas was observed in this study.

Only Danielson and Bryan, (1964) found national news to be written on a level as low as 7.0. However, they were using a computerized readability formula, programmed by themselves, which was not used in any of the other studies. Perhaps a disparity between the formulas accounted for some of the variance.

In general, it appears that the readability of newspapers and magazines has not changed much, if at all, in recent years.

Mean Readability and Comparisons with Adult Reading Levels

In Table 6, a single readability level was obtained which represents the mean of all materials studied. On the Fry Nomograph the mean was on the 11th grade level. On the Flesch R.E.I. it was 45, or within the lower ranges of college level material. However, since Flesch defines his college level material as suitable for those who have completed high school or some college, it is similar to level 12 on the Fry Nomograph.

TABLE 6

MEAN READABILITY LEVELS FOR ALL MATERIALS STUDIED

	FRY			FLESCH			
Time Period	Syl-lables	Sen-tences	G.E.	Syl-lables	Sen-tences	G.E.	R.E.I.
1	160.4	4.6	12th	165.3	23.6	College	43
2	156.5	5.2	10-11th	161.9	22.7	College	47
Total	158.4	4.9	11th	163.7	23.2	College	45

Whereas a majority of students who drop out before completing the 12th grade are reading below, rather than above grade level, or average for their grade, this writer felt that it would be fair to say that the bulk of these materials are directed toward, and could be adequately comprehended only by adults with approximately twelve years of education, or people who can read on a 12th grade level.

According to the Current Population Reports, conducted in March of 1975, 37% of the population over twenty-five years of age, or 44 million Americans did not complete 12th grade. (U.S. Bureau of the Census, 1976) These are the people whom we would expect to experience some difficulty with the election literature offered by newspapers and magazines. This figure of 44 million is a conservative one as it does not include the high school graduates who are reading on levels below 11th and 12th grade, or adults below the age of twenty-five.

In a report published in 1971 as part of a U.S. Office of Education Project on the status of instruction and achievement in reading in the U.S., Abraham Carp attempted to ascertain the reading abilities of adult Americans. Using the published norms of four widely used reading tests (STEP II, MAT, CAT, and CTBS),[6] he

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[6] STEP II - Sequential Tests of Educational Progress
MAT - Metropolitan Achievement Tests
CAT - California Achievement Tests
CTBS - California Test of Basic Skills

determined the percentage of people who would be reading on a given grade level. According to the combined norms of the tests, 50% of those with eight years of education, 24% of those with ten years, and 13% of those with twelve years, would be reading on a below 8th grade level. By then applying these percentages to the statistics on educational attainment supplied by the Bureau of the Census, he was able to estimate that there are "about 45 million individuals reading below the equivalent of 8.0. (Figures were not supplied for levels beyond 8) (Carp, 1971)

This figure of 45 million is almost identical to the 44 million figure of Americans above twenty-five years of age who did not complete the 12th grade. As all of the newspaper and magazine materials were written on levels above 8th grade, these figures paint an even dimmer picture of the number of Americans who would most likely be unable to comfortably handle the election news.

Therefore, based on the Current Population Reports educational attainment figures, and the Carp statistics, this writer estimates that more than 45 million or 37% of the adult population would experience difficulty in reading the materials tested here.

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this study was to determine the reading difficulty of the most commonly available mass political literature during a presidential campaign, and in so doing, to determine the reading level necessary to comprehend the bulk of these materials. The literature sampled was obtained from copies of the New York Times, the New York Daily News, the New Brunswick Home News, Newsweek, Time, and U.S. News and World Report. To determine reading level, the Flesch R.E.I. and the Fry Nomograph were used. Material was sampled from three issues of each source during each of two time periods, that of the conventions (July), and that of the period preceding the election (October).

Findings

The total mean newspaper readability across the two time periods was 12th grade as measured on the Fry Nomograph, and on the college level on the Flesch scale. The total magazine readability was found to be on the 10th-11th grade level according to the Fry, and on the 12th grade level on the Flesch scale. The materials

tested during the second time period received readability ratings approximately one grade level lower (material less difficult) than did the material tested during the first time period, partially due to the increased amount of "Human Interest and Interview" material. The total readability for all sources was computed to be on the 11th grade level as indicated by the Fry Nomograph, and on the college level according to the Flesch formula.

Using the statistics from the 1976 Current Population Reports and the Carp (1971) study based on the published norms of four standardized reading tests, and conducted for the Office of Education, it was estimated that some 44 million Americans (37% of the adult population) could not competently deal with the materials studied.

It was therefore concluded that the currently available newspapers and magazines are too difficult to serve the purpose of informing the public.

Implications of the Study

This study supports and complements the numerous other studies conducted in the last ten years on the readability of widely used written materials. Those studies indicated that most of the materials meant to inform or serve the public are written on levels which make them incomprehensible to a large portion of the citizenry. For example, the Reiland (1973) study on ballot propositions mentioned in the review of the liter-

ature found the issues to be written on a college level.

Similarly, a study of political knowledge and attitudes found that only 44% of a sample population could correctly answer five questions calling only for the ability to read and properly use a simple ballot. (National Assessment of Educational Progress, 1973)

An Office of Education report on Adult Functional Competency in five general knowledge areas (occupational knowledge, consumer information, government, health, and community resources) found only 46% of adult Americans to be proficient in dealing with these materials, with fully 20% rated as totally non-functional. (Northcutt, et al., 1975)

The Louis Harris (1970) survey on survival materials (classified ads, application forms, etc.) found that 21 million people (15% of the adult public) lacked, "some or all of the basic functional reading skills to deal successfully with even the most simple everyday experiences of modern life."

Kitty, in studying "the readability of commonly encountered materials," found cooking instructions on frozen dinners to be on the 8th grade level, directions on medication (aspirin) to be on the 10th grade level, insurance policies on the 12th grade level, and leases for apartments on the college level. (Many are Found Unable to Comprehend, 1976)

Sharon reported that 1/3 of all adults read for an average of one hour per day while at work, and Sticht, et al., ascertained the reading level of materials necessary for four of the lowest level Army jobs (armor crewman, repairman, supply clerk, and cook) to be 8.0 (Sharon, 1974; Sticht, et al., 1972)

In all areas of daily living, from the ability to inform oneself so as to be able to vote intelligently, to filling out application forms and reading directions on medication, a large percentage of Americans are unable to function properly, or make use of the materials normally considered to be at their disposal.

One solution would be to raise the level of accepted literacy from 5.0 (now the standard accepted by the Bureau of the Census, and the U.S. Army) to at least 8.0, and attempt to wipe out illiteracy at this level. Or, put another way, it must be recognized that simple literacy is not sufficient to allow an individual to function in our complex society. More advanced reading skills for all must be the goal. Indeed, it appears that some headway is being made in this direction as only 15% of the 22-24 age group did not complete 12th grade, as opposed to 37% of the age 25 and above group. (Current Population Reports, 1976)

However, this is still much too large a percentage of the population to write off, and many of the materials studied would prove difficult even for those achieving the

8th grade literacy qualification. Something must be done now for the 44 million Americans presently unable to cope with their society's printed materials if we are to achieve the goal of an informed citizenry in the democratic tradition. For the immediate future though perhaps less ideal, it would be easier and more practical to lower the level of necessary materials than to raise overall literacy. A viable first step might be governmental intervention in areas already subject to regulation, i.e. setting levels for ballot propositions, drug labels, government forms, leases, etc., and a system of incentives to writers and publishers, to begin increasing the supply of reading materials which are indeed readable.

Suggestions for Further Research

There is a need for continuous monitoring of the readability of commonly read newspapers and magazines to determine if they are indeed comprehensible to the public they should be serving. Within this area it would be useful to determine which sections of the paper are being read by whom, and to ascertain whether higher readability sections (foreign and national news) are losing readership because of their difficulty. A split-run study would be useful to determine not only differences in readership between harder and easier articles on the same topic, but also differences in the comprehension of the groups reading the different materials. This could be

done for articles on three readability levels (perhaps 8th, 10th, and 12th grade) so that the effect of more subtle differences in readability than those usually tested could be ascertained.

More sophisticated readability studies are also very much called for on other essential reading materials. Studies need to be completed on medication instructions, government forms, and on job related materials, to name but a few.

Studies in these areas should be made available to those in the government, and in publishing, who have the power to effect these needed changes.

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COURSE WORK

Spring 1974		Instructor
290:561	Foundations of Reading Instruction	Dr. Edward Fry
Summer 1974		
290:501	Educational Tests & Measurements	Mr. Lee Schroeder
610:522	Materials for Young Adults	Dr. Elaine Simpson
Fall 1974		
299:564	Remedial Reading	Dr. Joseph Zelnick
Spring 1975		
290:514	Adolescent Psychology	Dr. Albert Montare
290:525	Psychology of Exceptional Children	Dr. Ivan Holowinsky
Fall 1975		
290:540	Introduction to Learning	Dr. William Gillooly
299:565	Laboratory in Remedial Reading	Dr. Jane Morse
Spring 1976		
299:566	Seminar in Reading Research & Supervision	Dr. Martin Kling
Fall 1976		
290:599	Master's Thesis Research	Dr. Edward Fry

Summer 1972 - Long Island University

ED 613	Methods and Materials in Teaching English to Speakers of Other Languages	Dr. Gladys Wolff

Fall 1973 - Kean College

EPS 5000	Foundations of Graduate Study in Education	Dr. Joseph Preill

VITA

Name: Doris E. Simon Zingman

Address: 90 Marvin Lane
Piscataway, N.J. 08854

Educational Background

High School: Abraham Lincoln H.S.
Brooklyn, New York
1965-1968

College: Brooklyn College - CUNY
Brooklyn, New York
B.A. cum laude - (English)
1968-1972

Professional Experience:

1972-1973 English Teacher
William Grady Vocational-Technical H.S.
Brooklyn, New York

1973-1974 Reading Teacher
New Brunswick H.S.
New Brunswick, New Jersey

1974-1977 Reading Teacher
Piscataway H.S.
Piscataway, New Jersey